

## WO 03/086905

PCT/DK02/00891

12

## **CLAIMS:**

5

15

20

25

- 1. A display and distribution packaging unit for eggs or similar fragile articles, said unit being made of an opaque material, e.g. moulded pulp and comprising:
- a bottom part (2) comprising non-planar side surfaces of compartments (4) so as to match at least partially the outer contours of the eggs contained within said unit;
- a cover part (3) comprising a top surface (10) and substantially planar front- and rear surfaces (14, 15);
- where said cover part (3) comprises portions (8) reflecting the shape of the eggs contained within said unit.
  - 2. A display and distribution packaging unit according to claim 1, where said portions (8) reflecting the shape of the eggs are located on substantially planar surfaces of said cover part (3).
  - 3. A display and distribution packaging unit according to claim 1 or 2, where said portions (8) reflecting the shape of the eggs each comprises substantially a quarter of the total surface area of the corresponding egg.
  - 4. A display and distribution packaging unit according to claim 1, 2 or 3, where said substantially planar surfaces of the cover part (3) comprising said portions (8) reflecting the shape of the eggs contained in the unit are located at one longitudinal end or both longitudinal ends of the cover part (3).
  - 5. A display and distribution packaging unit according to claim 1, 2, 3 or 4, where said substantially planar surfaces of the cover part (3) comprising said portions (8) reflecting the shape of the eggs contained in the unit are one or more of the surfaces comprising said top surface (10), front surface (14) and rear surface (15).
  - 6. A display and distribution packaging unit according to any one of the preceding claims, where said portions (8) reflecting the shape of the eggs are formed as portions of solids of revolution with an axis of revolution substantially normal to said top surface (10) of the cover part (3).

30

WO 03/086905 PCT/DK02/00891

13

- 7. A display and distribution packaging unit according to claim 1, where said non-planar side surfaces of the bottom part (3) are shaped as a portion of the surface of an egg.
- 8. A display and distribution packaging unit according to claim 7, where said nonplanar side surfaces of the bottom part (3) are formed as portions of solids of revolution with an axis of revolution substantially coinciding with said axis of revolution of said portions (8) in the cover part (3).
- 9. A display and distribution packaging unit according to any of the preceding claims, where said egg-shaped portions of the cover part (3) continues in said corresponding egg-shaped portions of the bottom part (2), the corresponding portions in the cover part (3) and in the bottom part (2) thereby forming a continuous portion of the surface of an egg.

15

20

- 10. A display and distribution packaging unit according to any of the preceding claims, where said egg-shaped portions (8) located at one longitudinal end or both longitudinal ends of the cover part (3) together with the corresponding egg-shaped portions in the bottom part (2) correspond to a major portion of the surface of an egg.
  - 11. A display and distribution packaging unit according to claim 10, where said major portion of the surface of an egg constitutes not less than approximately 60% of the total surface of an egg.
  - 12. A display and distribution packaging unit according to claim 1, where said cover part (3) on those portions (8) hereof which are formed to reflect the eggs in the unit, has a different surface structure than the remaining portions of the cover part.
- 13. A display and distribution packaging unit according to claim 12, where said surface structure is relatively smooth and the surface structure of the remaining surfaces of the unit is relatively coarse.

WO 03/086905 PCT/DK02/00891

- 14. A display and distribution packaging unit according to claim 12, where said surface structure is relatively coarse and the surface structure of the remaining surfaces of the unit is relatively smooth.
- 15. A display and distribution packaging unit according to claim 1, 12, 13 or 14, where said bottom part (2) on those portions hereof, which are formed to match the contours of the eggs in the unit, has a different surface structure than the remaining portions of the cover part.
- 16. A display and distribution packaging unit according to claim 15, where said surface structure is relatively smooth and the surface structure of the remaining surfaces of the unit is relatively coarse.
- 17. A display and distribution packaging unit according to claim 15, where said
  15 surface structure is relatively coarse and the surface structure of the remaining surfaces of the unit is relatively smooth.
  - 18. A display and distribution packaging unit according to claim 1, where said cover part (3) on the planar front side (14) hereof is provided with at least one opening (9) for engagement with one or more protrusions (7) provided on said bottom part (2).

20

25

- 19. A display and distribution packaging unit according to claim 18, where said engagement between the one or more protrusions (7) and corresponding openings (9) is a tight engagement around the complete circumference of the protrusion (7).
- 20. A display and distribution packaging unit according to claim 18, where the shape of said openings (9) and corresponding protrusions (7) substantially correspond to a longitudinal cross-section through an egg.
- 21. A display and distribution packaging unit according to claim 18, where the outer surface of said protrusions (7) is substantially planar.
  - 22. A display and distribution packaging unit according to claim 18, where said outer surface of the protrusions (7) is flush with said front surface (14) of the cover part (3).

WO 03/086905

5

10

15

20

- 23. A display and distribution packaging unit according to claim 18, where the lower edge portion of said protrusions (7) is flush with said front surface (14) and where the upper edge portion of said protrusions (7) extends outwardly relative to the front surface (14).
- 24. A display and distribution packaging unit according to any of the preceding claims, where said top surface (10) and/or said front surface (14) and/or said rear surface (15) of the cover part (3) is/are provided with graphical and/or pictorial information and/or embossing.
- 25. A display and distribution packaging unit according to any of the preceding claims, where said outer surface of the protrusions (7) is provided with graphical and/or pictorial information and/or embossing.
- 26. A display and distribution packaging unit according to any of the preceding claims, where said bottom part (2) and said cover part (3) are connected to each other by means of a hinge portion (12) extending along one edge portion of the interface between said bottom and cover parts (2, 3).
  - 27. A display and distribution packaging unit according to any of the preceding claims, where the interface between said cover part (3) and said bottom part (2) inclines downwardly from the rear side of the package unit to the front side hereof, thus yielding a higher front side (14) of the cover part (3) than rear side (15) of the cover part.
  - 28. A display and distribution packaging unit according to claim 27, where said interface is curved.
- 29. A display and distribution packaging unit according to claim 1, where the lower edge of said front surface (14) of the cover part (3) is curved in a downward direction beneath the interface between said cover part (3) and said bottom part (2) for extension of the area of the front surface (14) and for facilitating opening of the unit.

- 30. A display and distribution packaging unit according to claim 29, where the downward extension of the front surface (14) covers up to the total height of the bottom part (2).
- 31. A display and distribution packaging unit according to any of the preceding claims, where said bottom part (2) on the under side (18) hereof is provided with a pattern of supporting ribs (11) connecting base portions (19) of the egg-shaped compartments (4) in the bottom part (2), whereby the mechanical strength of the unit is increased.

10

- 32. A display and distribution packaging unit according to claim 31, where said base portions (18) and said supporting ribs (19) define a substantially planar surface for placement of the unit.
- 15 33. A display and distribution packaging unit according to claim 31, where said base portions (18) and said supporting ribs (19) define a surface for placement of the unit, the central portions of which surface are elevated with respect to the peripheral portions hereof.
- 34. A display and distribution packaging unit according to any of the preceding claims, where said one or more protrusions (7) are provided on a flexible flap (6) placed along one upper edge portion of the bottom part (2).
- 35. A display and distribution packaging unit according to claim 34, where portions of said flexible flap (6) are formed such that they constitute a part of the walls of adjacent compartments (4).
  - 36. A display and distribution packaging unit according to any of the preceding claims 20 to 25, where the size of said planar face of the protrusions approximately corresponds to the size of the fingertip of a thumb.
  - 37. A display and distribution packaging unit according to any of the preceding claims 20 to 25, where the size of said planar face of the protrusions is within the range (20 mm to 30 mm) x (15 mm to 20 mm).

- 38. A display and distribution packaging unit according to any of the preceding claims, where said unit is formed as one integrated unit in one material.
- 39. A display and distribution packaging unit according to any of the preceding claims, where said compartments (4) of the bottom part (2) and said corresponding portions (8) of the cover part (3) reflecting the shape of the eggs in the unit define internal surfaces in the unit, which surfaces correspond to a portion of the total surface of an egg.
  - 40. A display and distribution packaging unit according to claim 39, where said internal surfaces in the unit correspond to at least 60% of the surface of an egg.

10

41. A display and distribution packaging unit according to claim 39 or 40, where said compartments (4) are furthermore provided with support structures (26) for the ends of the eggs (25) in the compartments.